**Work Order ID 104608** *104608* 

*July-12-13 10:30:38 AM*

**Item ID:** D2844-1 **Accept** *N900040100* **Setup Start** *NS1* **Stop** *NS2*

**Revision ID:**

**Item Name:** Arms

**Start Date:** 7/12/13 **Start Qty:** 8.00 *8* **Cust Item ID:**

**Required Date:** 7/12/13 **Req'd Qty:** 8.00 *8* **Customer:**

**Reference:**

**Run Start** *NR1* **Stop** *NR2*

**Approvals:** **Process Plan:** MLJ **Date:** 13-07-15 **Tooling:** **Date:**

**QC:** **Date:** **SPC (Y/N):** **Date:**

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|

| Draw Nbr | Revision Nbr |
|---|---|
| D2844 | Rev A |

100 *100* Brake NC / Brake NC — NC BRAKE — 0.00 — Accept Qty: (8) SAD 13-10-10

**Memo** 0.00
Form per Dwg D2844 using brake and bending Jig DT 8238-B Deburr
22.564

110 *110* QC / Quality Control — QC5- Inspect part completeness to step on W/O — 0.00 — DAS 27 9-89 — Accept Qty: 8

**Memo** 0.00 13.10.10

120 *120* Powdercoat / Powder Coating — White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel — 0.00 — 8XØM/13/10/10

**Memo** 0.00
START TIME: 1:00 ________ OVEN TEMPERATURE: 400°F
________ FINISH TIME: 1:30

M126125

DQA: ____________ Date: ____________

# WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

| Work Order: ____________ <br> Part No. ____________ <br> NCR No. ____________ | **DISPOSITION** <br> Rework ☐ <br> Scrap ☐ <br> Use-as-is ☐ <br> Suspected Unapproved ☐ | **AGAINST DEPARTMENT/PROCESS** <br> Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐ <br> Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐ <br> Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ <br> Large Fab ☐ Composite ☐ Supplier ☐ ☐ |
|---|---|---|

| Root Cause | | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Design | ☐ | | | | | | | | | |
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Handling/Pre | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Offset/Setup | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Transport | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

| Landing Gear | General | | | |
|---|---|---|---|---|
| ☐ Bending | ☐ Bend | ☐ Folio/Program | ☐ Outside Dimensions | ☐ Pressure/Forced |
| ☐ Centre Not Concentric | ☐ BOM/Route | ☐ Grain | ☐ Over/Under tolerance | ☐ Set-up |
| ☐ Cracks | ☐ Broken/Damage/Defect | ☐ Hardware | ☐ Part Incorrect | ☐ Temperature/Cure |
| ☐ Crimp/Kink/Ripple/Wave | ☐ Burrs | ☐ Inspection Incomplete/Unqualified | ☐ Part Lost/Missing | ☐ Weld |
| ☐ Cuffs | ☐ Contamination | ☐ Instructions Incomplete/Unclear | ☐ Part Moved | ☐ Wrong Stock Pulled |
| ☐ Crushing | ☐ Countersink | ☐ Misaligned/off center | ☐ Positioned Wrong | |
| ☐ Heat Treat | ☐ Cut Too Short | ☐ Mislabeled | ☐ Power Loss/Surge | ☐ Other |
| ☐ Inspection Strip in Tube | ☐ Drawing | ☐ Misread | ____________ | |
| ☐ Marks/Chatter | ☐ Drill Holes | ☐ Off-set | ____________ | |
| ☐ Turning Sequence | ☐ Finish | ☐ Out of Calibration | ____________ | |
| ☐ Wave/Twist in Tube | ☐ Fit/Function | ☐ Out of Sequence | ____________ | |

**Work Order ID 104608** *104608*



*July-12-13 10:30:39 AM*

**Item ID:** D2844-1 **Accept** *N900040100* **Setup Start** *NS1*

**Revision ID:**

**Item Name:** Arms **Stop** *NS2*

**Start Date:** 7/12/13 **Start Qty:** 8.00 *8* **Cust Item ID:**

**Required Date:** 7/12/13 **Req'd Qty:** 8.00 *8* **Customer:**

**Reference:**

**Run Start** *NR1*

**Stop** *NR2*

**Approvals:** **Process Plan:** ____ **Date:** ____ **Tooling:** ____ **Date:** ____

**QC:** ____ **Date:** ____ **SPC (Y/N):** ____ **Date:** ____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 130 *130* QC Quality Control | QC3- Inspect Part Finish<br>**Memo** | 0.00<br>0.00 | | | | 8 | ∅ | 13-10-10 | DAS 34 9-89 |
| 140 *140* QC Quality Control | QC6- Inspect dimensions to drawing<br>**Memo** ensure parts are still as per dwg D2844 | 0.00<br>0.00 | DAS 27 9-89 13 10 11 | | | 8 | | | |
| 150 *150* Packaging Packaging | Identify as per dwg & Stock Location:_______<br>**Memo** (2x) PPP 106942<br>(4x) PPP 102151<br>(2x) PPP 104274 | 0.00<br>0.00 | | | | 8x | DAS 28 9-89 | 13-10-11 | |

DQA: ________ Date: ________

# WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

| | DISPOSITION | AGAINST DEPARTMENT/PROCESS | | | |
|---|---|---|---|---|---|
| Work Order: ________ | Rework ☐ | Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Part No. ________ | Scrap ☐ | Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| | Use-as-is ☐ | Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| NCR No. ________ | Suspected Unapproved ☐ | Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|
| Design ☐ | | | | | | | | | |
| Doc/Data ☐ | | | | | | | | | |
| Equip/Tooling ☐ | | | | | | | | | |
| Handling/Pre ☐ | | | | | | | | | |
| Material ☐ | | | | | | | | | |
| Operator ☐ | | | | | | | | | |
| Offset/Setup ☐ | | | | | | | | | |
| Process ☐ | | | | | | | | | |
| Supplier ☐ | | | | | | | | | |
| Training ☐ | | | | | | | | | |
| Transport ☐ | | | | | | | | | |
| Unapproved ☐ | | | | | | | | | |

## FAULT CATEGORY

| Landing Gear | General | | | |
|---|---|---|---|---|
| ☐ Bending | ☐ Bend | ☐ Folio/Program | ☐ Outside Dimensions | ☐ Pressure/Forced |
| ☐ Centre Not Concentric | ☐ BOM/Route | ☐ Grain | ☐ Over/Under tolerance | ☐ Set-up |
| ☐ Cracks | ☐ Broken/Damage/Defect | ☐ Hardware | ☐ Part Incorrect | ☐ Temperature/Cure |
| ☐ Crimp/Kink/Ripple/Wave | ☐ Burrs | ☐ Inspection Incomplete/Unqualified | ☐ Part Lost/Missing | ☐ Weld |
| ☐ Cuffs | ☐ Contamination | ☐ Instructions Incomplete/Unclear | ☐ Part Moved | ☐ Wrong Stock Pulled |
| ☐ Crushing | ☐ Countersink | ☐ Misaligned/off center | ☐ Positioned Wrong | |
| ☐ Heat Treat | ☐ Cut Too Short | ☐ Mislabeled | ☐ Power Loss/Surge | ☐ Other |
| ☐ Inspection Strip in Tube | ☐ Drawing | ☐ Misread | | |
| ☐ Marks/Chatter | ☐ Drill Holes | ☐ Off-set | | |
| ☐ Turning Sequence | ☐ Finish | ☐ Out of Calibration | | |
| ☐ Wave/Twist in Tube | ☐ Fit/Function | ☐ Out of Sequence | | |

**Work Order ID 104608**

*July-12-13 10:30:39 AM*

*104608*

**Item ID:** D2844-1

**Revision ID:**

**Item Name:** Arms

**Accept** *N900040100*

**Setup** **Start** *NS1*

**Stop** *NS2*

**Start Date:** 7/12/13 **Start Qty:** 8.00 *8*

**Required Date:** 7/12/13 **Req'd Qty:** 8.00 *8*

**Cust Item ID:**

**Customer:**

**Reference:**

**Approvals:** **Process Plan:** ____________ **Date:** ________ **Tooling:** ________ **Date:** ________

**QC:** ____________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________

**Run** **Start** *NR1*

**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 160<br>*160*<br>QC<br>Quality Control | QC21- Final Inspection - Work Order Release<br><br>**Memo** | 0.00<br><br>0.00 | | | | MLJ 13-10-11 | | | MLJ 13-10-11 |

DQA: ____________ Date: ____________

QA Closed: Date:

# WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: ____________

Part No. ____________

NCR No. ____________

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | |
|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Design | ☐ | | | | | | | | | |
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Handling/Pre | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Offset/Setup | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Transport | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other ____________

# Picklist Print

*July-12-13 10:30:38 AM*



**Work Order ID:** 104608

**Parent Item:** D2844-1

**Parent Item Name:** Arms

**Start Date:** 7/12/13 **Required Date:** 7/12/13

**Start Qty:** 8.00 **Required Qty:** 8.00

**Comments:** IPP: B00.11.01Removed P/O for Powder Coat - in house processEC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **M304TR0.500W.035**<br>304 RD Tube .500 x .035W | | Purchased | No | | | 100 | f | 511.0691 | **1.8991** | **15.992421** | SAD | 13-10-10 | |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| MAT017 | 511.06913 | | |
| 118702 | 0.00003 | | |
| 123303 | 138.9645 | | |
| 125513 | 372.1046 | | 15.993 |

DQA: ____________ Date: ____________

# WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

Work Order: ____________

Part No. ____________

NCR No. ____________

**DISPOSITION**

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | |
|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

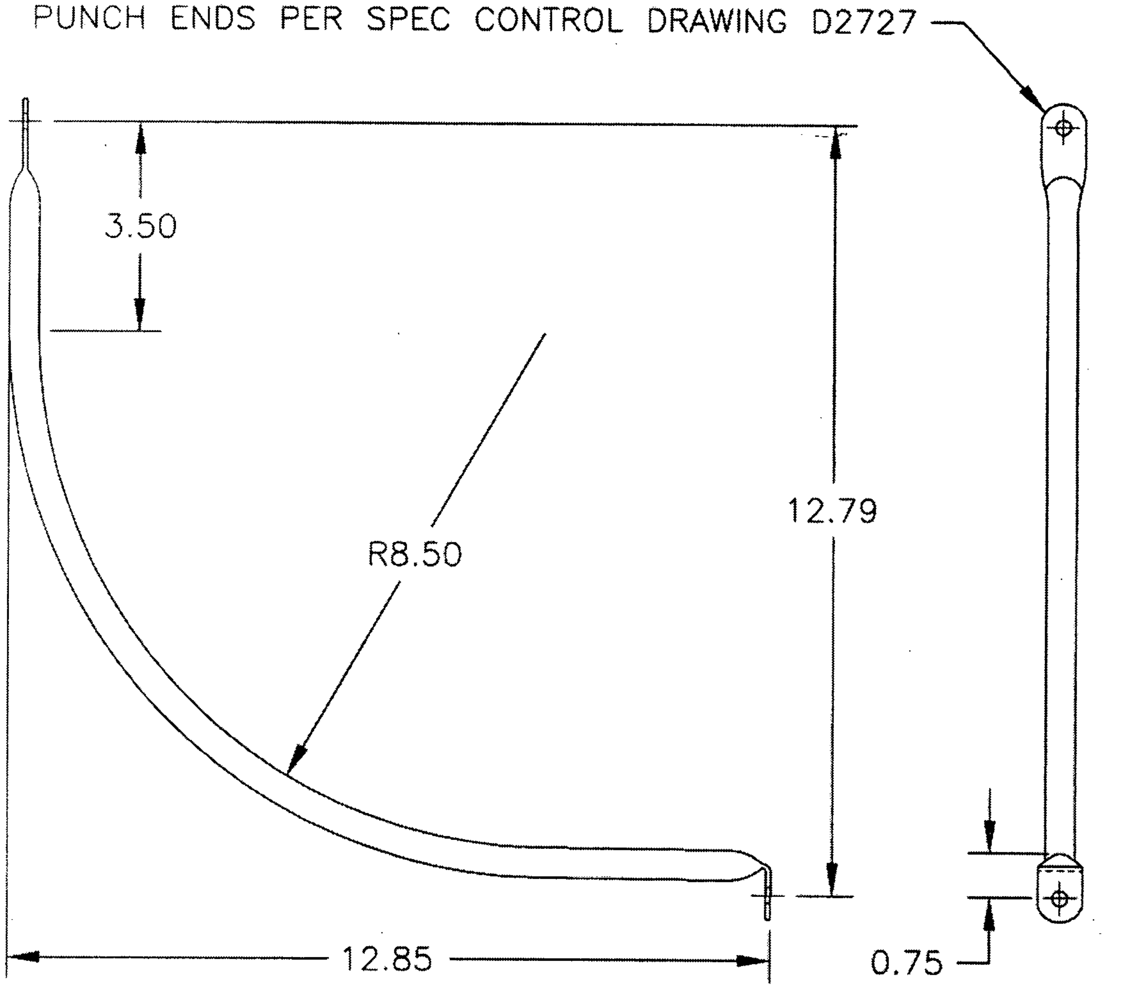
| Root Cause | | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Design | ☐ | | | | | | | | | |
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Handling/Pre | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Offset/Setup | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Transport | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

| Landing Gear | General | | | |
|---|---|---|---|---|
| ☐ Bending | ☐ Bend | ☐ Folio/Program | ☐ Outside Dimensions | ☐ Pressure/Forced |
| ☐ Centre Not Concentric | ☐ BOM/Route | ☐ Grain | ☐ Over/Under tolerance | ☐ Set-up |
| ☐ Cracks | ☐ Broken/Damage/Defect | ☐ Hardware | ☐ Part Incorrect | ☐ Temperature/Cure |
| ☐ Crimp/Kink/Ripple/Wave | ☐ Burrs | ☐ Inspection Incomplete/Unqualified | ☐ Part Lost/Missing | ☐ Weld |
| ☐ Cuffs | ☐ Contamination | ☐ Instructions Incomplete/Unclear | ☐ Part Moved | ☐ Wrong Stock Pulled |
| ☐ Crushing | ☐ Countersink | ☐ Misaligned/off center | ☐ Positioned Wrong | |
| ☐ Heat Treat | ☐ Cut Too Short | ☐ Mislabeled | ☐ Power Loss/Surge | ☐ Other |
| ☐ Inspection Strip in Tube | ☐ Drawing | ☐ Misread | | |
| ☐ Marks/Chatter | ☐ Drill Holes | ☐ Off-set | | |
| ☐ Turning Sequence | ☐ Finish | ☐ Out of Calibration | | |
| ☐ Wave/Twist in Tube | ☐ Fit/Function | ☐ Out of Sequence | | |

| DESIGN KE | DRAWN BY KE | DART AEROSPACE USA, INC. FAIRCHILD INTERNATIONAL AIRPORT, WA | |
|---|---|---|---|
| CHECKED | APPROVED | DRAWING NO. D2844 | REV. A SHEET 1 OF 2 |
| DATE 98.10.14 | | TITLE ARM | SCALE 1:3 |
| A | 98.10.14 | NEW ISSUE | |





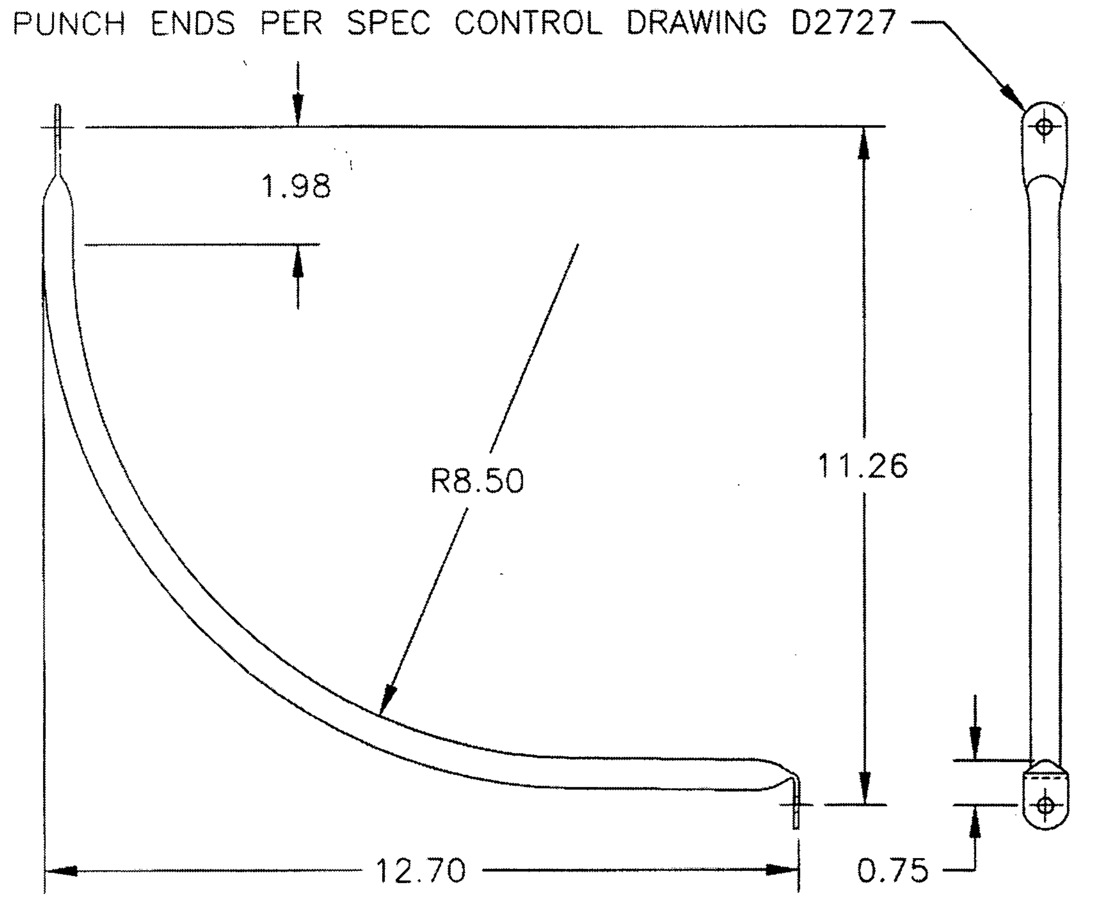

D2844-1

MATERIAL: AISI 304/316 SS TUBE, ø0.50 x 0.035 WALL
ENSURE TUBE IS SEAMLESS
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3

DART

| DESIGN KE | DRAWN BY KE | DART AEROSPACE USA, INC. FAIRCHILD INTERNATIONAL AIRPORT, WA | |
|---|---|---|---|
| CHECKED DH | APPROVED | DRAWING NO. D2844 | REV. A SHEET 2 OF 2 |
| DATE 98.10.14 | | TITLE ARM | SCALE 1:3 |

RELEASED 98.11.11 KE




D2844-3

MATERIAL: AISI 304/316 SS TUBE, ø0.50 x 0.035 WALL
ENSURE TUBE IS SEAMLESS
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3

# DART AEROSPACE LTD

DART AEROSPACE

| Description: Arms D2844 | | | Work Order: 104608 |
|---|---|---|---|
| Inspection Drawing: D2844-1 | Rev: A | | Part Number: D2844 |

## INSPECTION SHEET

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---|---|---|---|---|---|---|
| 3.50 | +/-0.030 | 3.50 | ✓ | | measuring tape | |
| 12.79 | +/-0.030 | 12.79 | ✓ | | measuring tape | |
| 12.85 | +/-0.030 | 12.85 | ✓ | | measuring tape | |
| 0.75 | +/-0.030 | 0.780 | ✓ | | Vern | |
| R8.50 | +/-0.030 | R8.50 | ✓ | | DT 8232 (A) | |
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| Measured by: SAD | Checked By: [signature] | QC inspector: DAS 27 9-89 | Engineering Approval (*if necessary*): |
|---|---|---|---|
| Date 13/10/10 | Date 13/10/10 | Date 13 10 10 | Date |

H:\FORMS\Quality Assurance\approved QA\Inspection sheet revA